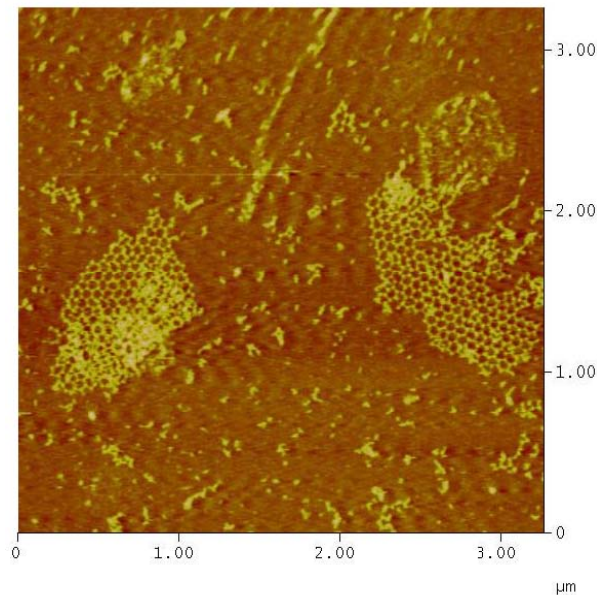


STRUCTURAL DNA NANOTECHNOLOGY

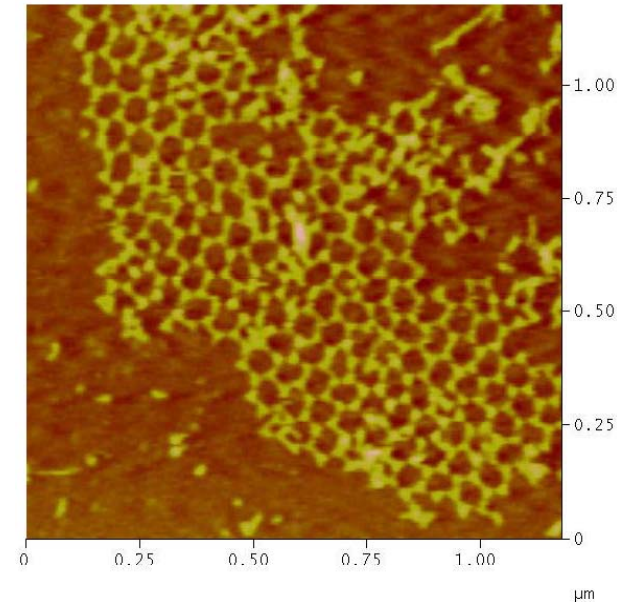
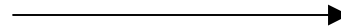
Recent Results, N.C. Seeman, NYU, DMR - 01138790

Honey-Comb Arrays from DNA Triangles

In principle, one should be able to make an extensive array of DNA triangles, but until recently success in this venture has eluded us. By slightly changing our designs we are now able to produce these arrays and visualize them in the AFM.



Zoom



Structural DNA Nanotechnology Performed by High School Students

Despite the fact that there are some structural and topological subtleties to structural DNA nanotechnology, many of the manipulations are really easy enough for talented high school students to perform. Five high school students are working in our lab right now, largely under the direction of Phil Lukeman, a postdoc. Last year, Alex Mittal, showed by atomic force microscopy that peptide nucleic acid molecules can be incorporated into DNA lattices, possibly obviating the need for Mg^{2+} , that often makes DNA incompatible with metallic nanoparticles.. For this work, he won, among others, the Intel Foundation Young Scientist Award, the Intel Foundation Achievement Award, the Intel ISEF Best of Chemistry Award, and the Intel Chemistry First Award in 2002. His winning poster is shown below. He is now at the University of Pennsylvania. For mentoring Mr. Mittal and John Sadowski (now at Caltech), we received a Certificate of Recognition from the Siemens Foundation.

